WHAT IS CLAIMED IS:

1   1.   A computer-readable storage medium having data structures stored

2   thereon or a computer-readable propagated signal having data structures, the data

3   structures comprising:

4   an access control group data structure to store access control group data;

5   a user access data structure to store user access data wherein the user access data

6   relates to at least one entry in the access control group data structure; and

7   a data object access data structure to store data object access data wherein the data

8   object access data relates to at least one entry in the access control group data structure.

1   2.   The medium or propagated signal of claim 1 wherein at least one entry in

2   the access control group data includes a characteristic for use in determining at least one

3   entry in the user access data structure that relates to the at least one entry in the access

4   control group data structure.

1   3.   The medium or propagated signal of claim 1 wherein at least one entry in

2   the access control group data structure includes a characteristic for use in determining at

3   least one entry in the data object access data structure that relates to the at least one entry

4   in the access control group data structure.

1   4.   The medium or propagated signal of claim 1 wherein at least one entry in

2   the access control group data structure includes:

3   a user characteristic for use in determining at least one entry in the user access

4   data structure that relates to the at least one entry in the access control group data

5   structure, and

6   an object characteristic for use in determining at least one entry in the data object

7   access data structure that relates to the at least one entry in the access control group data

8   structure.

1   5.   The medium or propagated signal of claim 1 wherein at least one entry in

2   the access control group data structure includes an indication of an access control rule for

3   use in determining:

4   at least one entry in the user access data structure that relates to the at least one

5   entry in the access control group data structure, and

6   at least one entry in the data object data structure that relates to the at least one

7   entry in the access control group data structure.

1   6.   The medium or propagated signal of claim 1 wherein at least one entry in

2   the data object access data structure includes an indication of action that is permitted to

3   be performed on a data object identified in the at least one entry in the data object access

4   data structure.

1   7.   The medium or propagated signal of claim 1 wherein:

2   at least one entry in the user access data structure includes an indication of action

3   that is permitted to be performed by a user identified in the at least one entry in the user

4   access data structure on a data object identified in the at least one entry in the data object

5   access data structure such that the at least one entry in the data object access data

6   structure relates to the at least one entry in the user access data structure.

1   8.   The medium or propagated signal of claim 1 further comprising an access

2   rule data structure to store access control rule data wherein the access control rule data

3   relates to at least one entry in the access control group data structure.

1   9.   The medium or propagated signal of claim 8 wherein at least one entry in

2   the access rule data structure includes an indication of action that is permitted to be

3   performed for at least one entry in the data object access data structure.

1   10.   The medium or propagated signal of claim 8 wherein at least one entry in

2   the access rule data structure includes an indication of how to determine at least one entry

3   in the data object access data structure that relates to at least one entry in the access

4   control group data structure.

1   11.   The medium or propagated signal of claim 8 wherein at least one entry in

2   the access rule data structure includes an indication of how to determine at least one entry

3   in the user access data structure that relates to at least one entry in the access control

4   group data structure.

1   12.   The medium or propagated signal of claim 1 wherein each of the access

2   control group data structure, the user access data structure, and the data object access data

3   structure are each separately maintainable from each of the other data structures.

1   13.   The medium or propagated signal of claim 1 wherein each of the user

2   access data structure and the data object access data structure are separately maintainable

3   from the other data structure.

1   14.   The medium or propagated signal of claim 13 wherein a change in the user

2   access data stored in the user access data structure does not necessitate a change in the

3   data object access data stored in the data object access data structure to maintain desired

4   control over access by particular users to particular data objects.

1   15.   The medium or propagated signal of claim 13 wherein a change in the data

2   object access data stored in the data object access data structure does not necessitate a

3   change in the user access data stored in the user access data structure to maintain desired

4   control over access by particular users to particular data objects.

1   16.   A computer-readable storage medium having data structures stored

2   thereon or a computer-readable propagated signal having data structures, the data

3   structures comprising:

4   an access control rule data structure to store access control rule data; and

5   a characteristic method data structure to store characteristic method data wherein

6   the characteristic method data relates to at least one entry in the access control rule data

7   structure.

1   17.   The medium or propagated signal of claim 16 further comprising a user

2   data structure to store user data.

1   18.   The medium or propagated signal of claim 17 wherein at least one entry in

2   the characteristic method data structure includes an indication of a method to determine a

3   user characteristic associated with at least one entry in the user data structure.

1   19.   The medium or propagated signal of claim 18 wherein at least one entry in

2   the access control rule data structure includes an indication of a criterion for use in

3   eliminating at least one entry in the data object data structure when using the method to

4   determine a user characteristic.

1   20.   The medium or propagated signal of claim 18 wherein at least one entry in

2   the characteristic method data structure includes an indication of a criterion for use in

3   eliminating at least one entry in the data object data structure when using the method to

4   determine a user characteristic.

1   21.   The medium or propagated signal of claim 16 further comprising a data

2   object data structure to store data object data.

1   22.   The medium or propagated signal of claim 21 wherein at least one entry in

2   the characteristic method data structure includes an indication of a method to determine a

3   data object characteristic associated with at least one entry in the data object data

4   structure.

1   23.   The medium or propagated signal of claim 21 wherein at least one entry in

2   the characteristic method data structure includes an indication of a criterion for use in

3   eliminating at least one entry in the data object data structure when using the method to

4   determine a data object characteristic.

1   24.   The medium or propagated signal of claim 21 wherein at least one entry in

2   the access control rule data structure includes an indication of a criterion for use in

3   eliminating at least one entry in the data object data structure when using the method to

4   determine a data object characteristic.

1   25.   An apparatus including a computer-readable storage medium having data

2   structures stored thereon, the data structures comprising:

3   an access control group data structure to store access control group data;

4   a user access data structure to store user access data wherein the user access data

5   relates to at least one entry in the access control group data structure; and

6   a data object access data structure to store data object access data wherein the data

7   object access data relates to at least one entry in the access control group data structure.

1   26.   An apparatus including a computer-readable storage medium having data

2   structures stored thereon, the data structures comprising:

3   an access control rule data structure to store access control rule data; and

4   a characteristic method data structure to store characteristic method data wherein

5   the characteristic method data relates to at least one entry in the access control rule data

6   structure.